Inventor: Oliver BIMBER Customer No.: 000028107

Docket No. F-9054 New Application Inventor: Oliv Filed: April 27, 2006 Page 1 of 7 Customer No.

Title: METHOD AND ARRANGEMENT FOR COMBINING HOLOGRAMS WITH COMPUTER GRAPHICS

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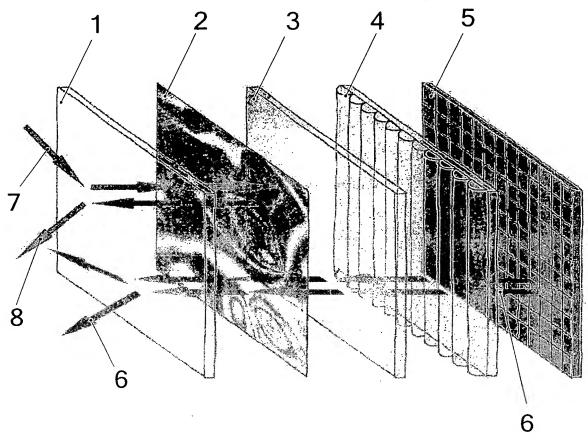


Fig. 1

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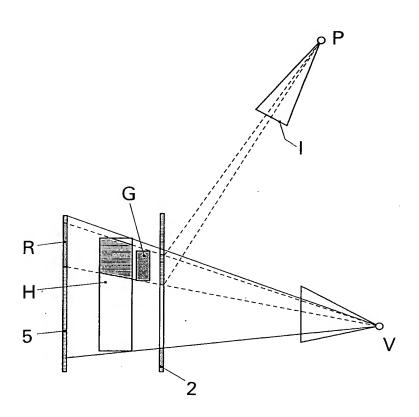


Fig. 2

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Creating a texture (T) off-axis from the perspective of the observer (V):

- a) Clearing all buffers using black
- 1. b) Writing hologram content (H) into Z buffer and frame buffer
 - c) Writing graphics content (G) into Z buffer and stencil buffer using Z buffer test
 - d) Clearing stencils in frame buffer using black

Creating an illumination image (I) from the perspective of the video projector (P):

- 2. a) Clearing all buffers using black
 - b) Writing image of the hologram (2), covered with texture (T), into frame buffer

Creating a computer graphics (R) off-axis from the perspective of the observer (V):

- a) Clearing all buffers using black
- b) Writing hologram content (H) into Z buffer
- c) Writing graphics content (G) into Z buffer and frame buffer using Z buffer test

Fig. 3

3.

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Creating a texture (T) off-axis from the perspective of the observer (V):

- a) Clearing Z buffer and stencil buffer using black and filling frame buffer with predefined color values
- b) Writing hologram content (H) into Z buffer
- c) Writing graphics content (G) into Z buffer and stencil buffer using Z buffer test
- d) Clearing stencils in frame buffer using black

Creating an illumination image (I) from the perspective of the video projector (P):

- 2. a) Clearing all buffers
 - b) Writing rectangle, provided with texture (T), into frame buffer

Creating a computer graphics (R) off-axis from the perspective of the observer (V):

- a) Clearing all buffers using black
- b) Writing hologram content (H) into Z buffer
- c) Writing graphics content (G) into Z buffer and frame buffer using Z buffer test

Fig. 4

3.

1.

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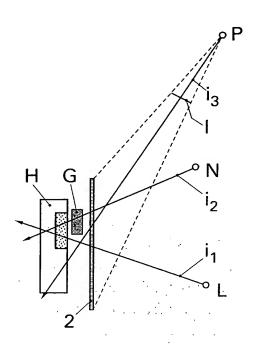
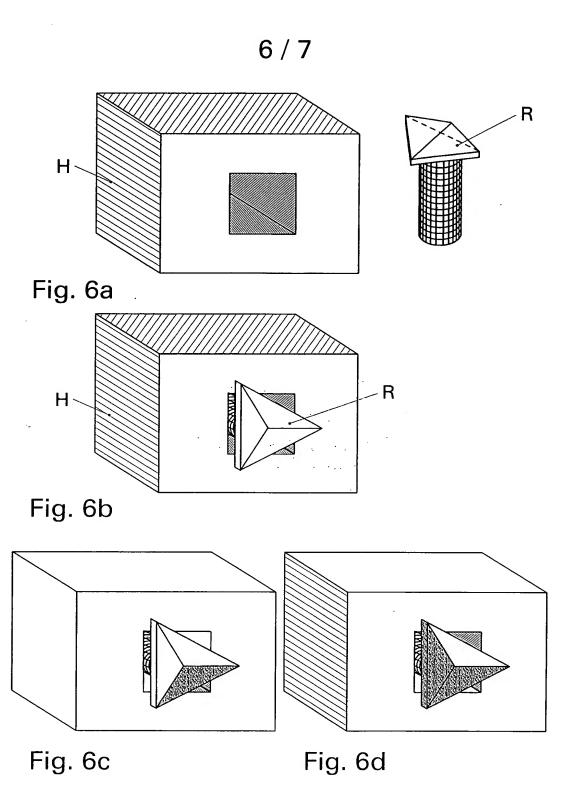


Fig. 5

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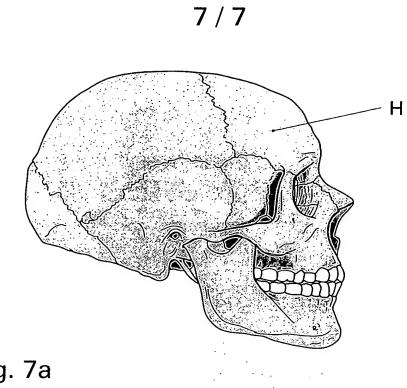


Fig. 7a

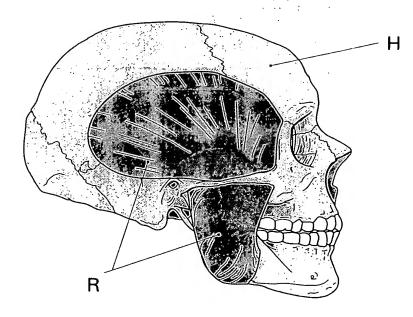


Fig. 7b